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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/533,438

06/01/2005

Ulrich Muller

05-0437

1391

30/996

7590

06/16/2008

ROBERT W. BECKER & ASSOCIATES

707 HIGHWAY 333

SUITE B

TIJERAS, NM 87059-7507

EXAMINER

KERNS, KEVIN P

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

06/16/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/533,438

Applicant(s)

MULLER, ULRICH

Examiner

Kevin P. Kerns

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-20 and 24-32 is/are pending in the application.
4a) Of the above claim(s) 28-32 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 15-20 and 24-27 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 29 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB08)
Paper No(s)/Mail Date 4/4/08
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: on page 6, 8th line, replace "capacitor" with "capacitor". Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 15-20 and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lemelson (US 3,437,783) in view of Guerin et al. (US 6,410,878).

Lemelson discloses a method of making a metallic composite mat (porous and plate-shaped) structure (best shown in Figures 1-4), in which the method includes the steps of providing metallic fibers in the form of prefabricated metallic fiber mats (filaments 25) that are derived from bulk material and are initially separated, with the opposite sides of the metallic composite being fused with cover layers in the form of wire meshes; and compressing and fusing the metallic fibers 25 together in a single process step, in which the fusing is performed in the presence of an inert gas by resistance welding via pressurizing (surface-shaped) electrodes (11,22) on opposite sides of the metallic composite, in order to heat the material by electrical resistance and

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thereby obtain point-type fusing of the metallic fibers 25 with respective closest metallic fiber(s) at the compressing and fusing location (column 1, lines 14-26 and 40-72; column 2, lines 1-4 and 35-72; column 3, lines 1-75; column 4, lines 1-14; and Figures 1-4). Lemelson does not specifically disclose the use of capacitor pulse fusing at a current pulse of up to 200,000 A for less than 1 second, and pressure bonding of between 0.1-10 N/mm².

However, Guerin et al. disclose a method of producing a flame support made of metal fibers, in which the method (as carried out in the apparatus of Figure 5) includes the steps of compressing the fibers 10 to form an agglomerated mat; connecting the mat to electrodes and a capacitor 120 (capacitor pulse fusing – abstract; column 2, lines 57-67; and column 5, lines 39-54) to bring the fibers into contact; and welding the metallic fibers to an intensity of higher than 10,000 A during a time period of 10-20 microseconds (column 3, lines 1-6), with the pressure bonding of the pulse fusing process being optimized between 0.1-10 N/mm² (as one of ordinary skill in the art would have recognized that optimization of ranges would involve routine experimentation), in order to produce fibers that are closely welded together under high voltage to produce a substantially uniform porosity product with improved mechanical strength (abstract; column 2, lines 52-67; column 3, lines 1-6; column 5, lines 39-67; column 6, lines 1-8; and Figures 4 and 5). Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to choose the instantly claimed ranges through process optimization, since it has been held that when there are general conditions of a

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claim disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See In re Boesch, 205 USPQ 215 (CCPA 1980).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the method of making a metallic composite matte (porous and plate-shaped) structure, as disclosed by Lemelson, by using the capacitor pulse fusing at a current pulse of up to 200,000 A for less than 1 second, as taught by Guerin et al., in order to produce fibers that are closely welded together under high voltage to produce a substantially uniform porosity product with improved mechanical strength (Guerin et al.; abstract; and column 5, lines 55-60).

Response to Arguments

4. The examiner acknowledges the applicant's amendment provided with the request for continued examination received by the USPTO on April 8, 2008. In addition, the Information Disclosure Statement (IDS) dated April 4, 2008 has been considered and initialed, and a copy is provided with this Office Action. Claims 28-32 remain withdrawn from consideration. Claims 15-20 and 24-27 remain under consideration in the application.

5. Applicant's arguments with respect to claims 15-20 and 24-27 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571)272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin P. Kerns
Primary Examiner
Art Unit 1793

/Kevin P. Kerns/
Primary Examiner, Art Unit 1793
June 7, 2008